



Presented to the
M^e_{B^e₁₆} Society
by
The Author

Chas. DD

5153

MEDICAL SOCIETY OF LONDON



ACCESSION NUMBER

PRESS MARK

DAVIDSON, S.

65236/A .

THE
HISTORY
AND
OBVIOUS PROPERTIES
OF
WINGATE SPAW, &c.

THE
HISTORY
AND
EVOLUTION OF
PROPERTY
OF
WINGATE 22ND CO

THE
HISTORY
AND
OBVIOUS PROPERTIES
OF
WINGATE SPAW,
IN THE
COUNTY OF NORTHUMBERLAND.

TO WHICH IS ADDED,
AN ACCOUNT OF MANY REMARKABLE CURES
EFFECTED BY THE USE OF THAT CHALYBEATE SPRING,
WITH DIRECTIONS HOW TO USE IT.

BY SAMUEL DAVIDSON,
SURGEON, AND AUTHOR OF A REVIEW OF,
AND OBJECTIONS TO
THE PRESENT PREVAILING THEORIES ON FEVERS.

Utilissimum sæpe quod contemnitur

PHOED.

L O N D O N :

PRINTED FOR THE AUTHOR; AND SOLD BY JAMES PALMER,
KELSO; JOS. JACKSON. WINGATE; THE AUTHOR,
AT ROTHBURY; AND BY A BOOKSELLER
IN EVERY PRINCIPAL TOWN.

Anno 1792.

THE
HISTORY

OF THE

WINDMILL

IN THE

COUNTY OF WILTSHIRE

TO WHICH IS ADDED

A DESCRIPTION OF THE REMAINS OF THE

WINDMILL OF ST. MARTIN'S

IN THE PARISH OF ST. MARTIN'S

BY SAMUEL DAVISON

ESQ. AND AUTHOR OF 'WILTSHIRE'

AND 'WILTSHIRE'

THE PRESENT PRESENT PRESENT

THE PRESENT PRESENT PRESENT

THE PRESENT PRESENT PRESENT

THE PRESENT PRESENT PRESENT

THE PRESENT PRESENT PRESENT

THE PRESENT PRESENT PRESENT

THE PRESENT PRESENT PRESENT

THE PRESENT PRESENT PRESENT

THE PRESENT PRESENT PRESENT

THE PRESENT PRESENT PRESENT

DEDICATION.

T O

WALTER TREVELYAN,
AND
THOMAS WITHAM, } ESQRS.

GENTLEMEN,

AS the following pages are intended to explain the virtues, and render the uses of Wingate spa more extensive, which is situated on your joint estate, and whose powerful qualities are now rendered so eminent by experience, I think the benevolent Proprietors of this celebrated spring justly entitled to this humble register of its merits, and more particularly, when they are so anxious to promote its usefulness among objects

jects of distress, by rendering whatever assistance is necessary to the comfort and accommodation of visitors.

I am,

With due respect and esteem,

Gentlemen,

Your most obedient and humble servant,

SAMUEL DAVIDSON.

Rothbury, April 12. 1792.

CON-

C O N T E N T S.

Introduction,	page I
Description, &c. of <i>Wingate spa</i> ,	II
Experiments by mixture on <i>Wingate spa</i> ,	18
Analysis of <i>Wingate water</i> ,	34
The medical virtues of <i>Wingate spa</i> , with the histories of cures effected by its use,	} 43
Observations on, and cases of cholic	45
Observations on, and cases of stomach complaints,	} 47
Observations on, and a case of asthma,	50
Observations on, and a case of scrophula,	52
Observations on, and a case of scurvy,	54
Observations on, and cases of uterine hemorrhages,	} 57
Observations on, and a case of fluor albus,	59
Observations on, and cases of herpes and leprosy,	} 61
Observations on, and cases of inflam- mation of the eyes,	} 65
Observations on, and cases of ulcers,	68
Observations on glects and seminal weakness,	74
Directions for using <i>Wingate spa</i> ,	77

I N T R O -

INTRODUCTION.

A health is the greatest temporal blessing we can enjoy, and which gives a relish to all other enjoyments, so every means that restores it when lost, merits our greatest attention. Among the numerous articles used for this great end, mineral waters have for many years claimed the regard both of the physician and philosopher. This cannot be a matter of wonder, when we consider, they not only have the happiness of mankind for their aim, but also a pleasure inexpressible, which is the natural consequence of such philosophical disquisitions.

There are many of the mineral waters in this kingdom, that have very justly acquired the highest reputation for their medicinal virtues and salutary effects. The constitutions that have been almost exhausted by the gout, rheumatism, scrophula, scurvy, dyspepsia, &c.

B

have

have been rescued as it were from the jaws of death, after all the articles in the *materia medica* have been used in vain. For the truth of this assertion, I need only call in the testimony of such patients as have at different times resorted to Bath, Bristol, Buxton, Harrogate, &c. for relief.

Though these are names that will continue their justly acquired reputation to the latest posterity, for the many cures effected by their use, yet I am fully convinced that Wingate spa, the subject of the following pages, is superior in strength and qualities to any of those above-mentioned.

I was first led into this opinion by attending to the remarkable cures effected so suddenly by this water, after other medicines had been administered by the faculty in vain; and was afterwards confirmed in my opinion by discovering such powerful principles in it as will evidently appear after the perusal of this essay.

The

The experiments on this mineral water were confirmed, and still much stronger illustrated by Dr Thomas Brown of Edinburgh, to whom I take this opportunity of returning my grateful acknowledgments for his distinct and just account of this water. I am also much indebted to the ingenious Mr George Wilkinson, surgeon in Sunderland, for the friendly assistance he afforded me, by his experiments and observations on this spa.

The result of both these gentlemen's experiments were almost in every respect similar. And such gentlemen of the faculty as are desirous of making farther experiments on this spring, may satisfy their doubts by obtaining any quantity of it from the spa, which they can do by addressing their requests to Samuel Davidson, surgeon in Rothbury.

The author is very solicitous that the properties attributed by him to Wingate spa may not rest on his testimony alone; he is therefore extremely anxious to ap-

peal to the experiments and observations of any of the faculty for the truth of his assertions.

It will not be foreign to my purpose to draw some comparisons between this spa and some of the most reputed springs in Europe.

BATH contains a chalybeate principle, with a calcareous earth, Glauber and sea salt. A gallon of it yields, upon evaporation, two drachms and fourteen grains of solid matter, of which it contains only $\frac{8}{37}$ of a grain of iron, fifty-four grains of earth, and eighty grains of salts. From this analysis we must be convinced that little benefit can be derived from its chalybeate property.

BRISTOL contains a calcareous earth, an insoluble felenite, a Glauber and sea salt. The solid contents yielded by one gallon is about thirty-eight grains, of which the calcareous earth and felenite make one half, and the Glauber and sea salt the other.

Buxton

INTRODUCTION.

Buxton warm springs afford upwards of a scruple of solid contents from a gallon. One third of this is saline, the other two are earth. They have little or no chalybeate property. This together with the others are recommended in a great variety of complaints, such as, gout, rheumatism, urinary diseases, impetigines, &c.

The Aix-la-Chapelle springs yield about thirty grains of solid contents from an English pint. They contain a great variety of sulphur, an earth, an alkaline, and sea salt. The medical effects of these waters are the same as the former, but more powerful and extensive.

Scarborough contains a chalybeate property, or alkaline earth, or a considerable portion of a purging neutral salt, with some sea salt. The chalybeate principle is quickly lost on exposure to the air.

Harrogate contains a sulphureous matter, and a quantity of sea salt; is

considerably heavier and somewhat colder than common water.

MOFFAT shews some appearance of sulphur, discovers copper, sea salt, and absorbent earth.

GERMAN SPA contains a martial earth, and alkaline salt. They have also a volatile spirit, or quantity of air. Their chalybeate property is soon lost when exposed to the air. They possess some properties as a chalybeate, but more as a cathartic and diuretic.

TUNBRIDGE contains a chalybeate principle, with a calcareous earth, Glauber and sea salt. But the chalybeate property is also here very trifling, and soon lost.

HARTEEL contains a pure vitriol martialis, and some suspicion of alum. It seems to contain a more than common quantity of air, by its sparkling and losing a degree of its astringency. It has been found useful in debilitated constitutions, hæmorrhages, immoderate evacuations, and in external sores.

None

None of all these above-mentioned bear any analogy to Wingate spa, except Hartfel. Wingate water will be afterwards shewn to contain a sal martis, an ochery earth, and alum. It affords thirty grains of solid matter in an English pint, of which sal martis is six grains, the ochery earth nine grains, and the alum fifteen. Its weight is somewhat lighter at the well than when kept, which indicates a small quantity of air. Its specific gravity is nearly the same with common water. Its taste remarkably astringent, aluminous, and inky, with some degree of acidity. It has no smell, and its heat less than common water.

From this enumeration of its properties, we will find it bears a great affinity to Hartfel. In its medical effects it approaches still nearer, which will appear from the history of the cures affixed to this essay.

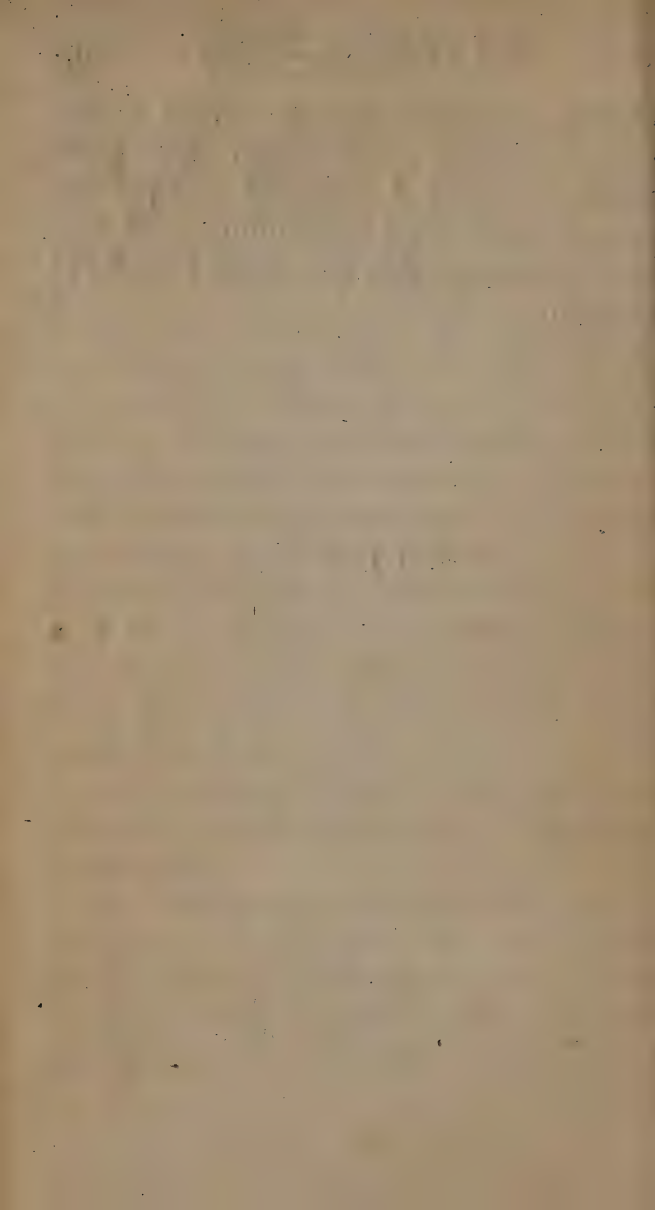
There are none of the cold, nor even any of the hot that have been mentioned, except those of Aix, that afford near so much solid

solid contents, which is a circumstance of itself sufficient to shew its strength. And there are none which bear near to the proportion of sal martis which Wingate spa contains ; a quality which cannot be too much valued for its medicinal powers ; but more especially, when the principle suffers little or no alteration by carriage or long keeping, when properly bottled and sealed at the spring, and taken at a proper time. This quality, which is peculiar to it, must give it a decided superiority and advantage over all the springs we have mentioned ; for all those lose it in a short time after they are taken from the well ; some in a few hours, if exposed, others in a day or two, although sealed. Hartfel is the only one which retains it for a considerable time.

As Wingate spa possesses such powerful properties, there can be little doubt of its acquiring additional reputation from the candor of those individuals who may resort to it for relief, as it has been
already

Already so beneficial to hundreds in the county wherein it is situated. And from good authority I acquaint the public, that all additional accommodations will be fitted up at this spa when found requisite.

T H E



THE
HISTORY
OF
WINGATE SPAW, &c.

MINERAL waters are divided into two classes, hot and cold. The causes of this difference in mineral waters may arise in a great measure from those substances with which they are impregnated; but a great deal also depends upon the immediate appearance of the water on the surface after the mixture of the ingredients; consequently many waters which appear cold, would have obtained the name of hot, had they made their appearance sooner. In proof of this assertion, there is often no material difference

difference in those principles with which hot and cold waters are impregnated.

WINGATE SPA belongs to the class of cold springs, and was first discovered about seven years ago, by some people in the neighbourhood, who generally used it in cases of ulcers, flatulencies, &c. As its effects were in many cases sudden and effectual, it soon became the object of attention to the country around, and was in a short time resorted to by great numbers of distressed objects from all quarters. From hearing of so many cures effected by this chalybeate water, I was induced to pay a particular attention to its nature; and suspecting from its taste that it was a very strong chalybeate water, I recommended the use of it to several patients, to whose cases I thought it adapted, and it proved beneficial in most of them. Some of these cases will be related at the end of this essay.

The reputation of this spring has continued to increase, and for these last two
years

years it was resorted to from all quarters.

This spring is situated on the joint estate of Walter Trevelyan and Thomas Witham, Esquires, in the parish of Longhorsly and county of Northumberland. It lies about twenty-five miles north from Newcastle, eight miles from Morpeth, twelve miles west from the German ocean, and four miles from the town of Rothbury. It is situated on the south side of a small rivulet, which runs to the east, and at the bottom of a gentle sloping hill, which faces to the north. On the top of this hill stands the village of Wingate, which is about half a mile south from the Spa.

The soil around the spring is first clay, and below this is a gravel, intermixed with a black gritty substance like coal-dross. The country in the vicinity is very hilly, and the soil of a cold nature. About half a mile to the south-east of the spa, and on the same side of the rivulet, there is a coal pit. To the
C south-west

South-west also of the spring, there are marks of several old coal pits, some of which are within less than a quarter of a mile of it. There is likewise a quarry of lime-stone about a quarter of a mile directly south from the spa, upon the rising of the hill which leads from it to the village of Wingate.

This spring pours from the pipe a stream sufficient to fill the bath in two hours, which in length is ten feet, in breadth six feet, and near five feet in depth. The free-stone on which the water falls is dyed black for about twelve inches round. From the pipe to its passage into the bath, which is sixteen yards, it deposits a great quantity of a red ochery sediment.

The taste of Wingate water, when kept some time in a bottle, is somewhat acid, remarkably astringent, with a strong ferruginous or inky flavour. It retains these properties for several days after exposure to the air, but its acidity gradually abates. When tasted at the spring, it

appears much stronger. This, however, depends much on the season of the year the water is taken. In the hot months of summer it retains its aluminous principle, but, even at the fountain, it loses great part of its chalybeate property. I sent a dozen of bottles to Mr Wilkin-son, surgeon in Sunderland, in April, which fulfilled all the experiments he tried. These bottles were not sealed.— In July he requested me to send him a small barrel of the water, which I did. Sometime afterwards I received the following answer:

“ These experiments were made with the first water you sent me in bottles; the other, which was sent afterwards in the cask, possessed a much greater proportion of alum and far less of the iron; nay, so little was there in it, that it scarcely shewed any black colour at all—the quantity of the galls were increased to double and treble to what I had used in the former experiments; but it coagulated milk firm-

“ ly. This last was in a cask, and al-
“ though it was fresher than the for-
“ mer—I mean it was sooner tried,
“ yet it betrayed no astringency. Whe-
“ ther the difference of the seasons
“ might not influence it, or whether
“ it might not have been filled from
“ the reservoir, I am at a loss to know ;
“ certain it is, that the iron was de-
“ composed.”

Mr Wilkinson's observations only tend to confirm me in my opinion, which I had entertained before receiving his letter ; for having occasion to be frequently at the spa last summer, I perceived an evident change in the taste of the water ; for, during the very warm weather, it had not that ferruginous taste as formerly. After the weather became more mild, it regained its former strength, and answered to a repetition of all the experiments. It will therefore be improper to drink this water in the hot months of summer. I think the most proper seasons are, from the middle of April

April to the beginning of June, and from the middle of August to the middle of October, for drinking Wingate spa.

Wingate spring, in its colour, is perfectly clear and transparent, and remains so for upwards of two weeks, although exposed to the air; neither does it sparkle a great deal more than common water, even at the fountain.

The weight of Wingate water, at the spring, is little less than that of common water; but when kept in a bottle, it is one degree heavier by the hydrometer, and about a grain in three ounces by accurate weight. This difference indicates that it loses some air by keeping, which it has at the spring.

On the fifth of March, 1791, when the thermometer in the shade was 50° . and common spring water was 48° . Wingate spa stood at 47° . by Farenheit's scale.

C 3 *EXPE-*

EXPERIMENTS BY MIXTURE.

The substances with which waters are in general impregnated are,

SULPHUR,
METALS,
SALTS, AND
EARTHS.

There are other properties which may be taken notice of, such as hard and soft, acid and alkaline, air, &c. It has been already observed, that this water does not sparkle much more considerably than common water, neither does its taste or smell indicate either fixed or inflammable air.

EXPERIMENT I. Upon gently heating a quantity of water in a glass vessel with a crooked tube, whose mouth was introduced into a glass filled with water, very little air was separated. That it contained no fixed air to any extent, was proved by mixing it with lime water, when no milkiness or any considerable

able cloudy appearance took place, but what was exactly similar to that produced by an alkali.

It is well known that water, when impregnated with fixed air, will readily dissolve iron; which iron will remain suspended and dissolved so long as the air remains in the water, but so soon as it escapes, a film gradually appears on the surface, and the particles fall to the bottom. This readily explains the ochery appearance at the bottom of mineral wells.

There are few waters but what, after exposure to air for any length of time, suffer considerably; those of Bath, Scarborough, &c. lose, in a few hours, their property of striking a purple with tincture of galls; this must depend upon the escape of air, as it is impossible to conceive that the iron will be volatilized; and if it depended on any other solvent, they would not lose it so readily. As a farther proof of this, we find that mineral waters, upon standing for a length
of

of time, till beginning putrefaction, they regain the property of striking a purple with galls, and after the process is over they lose it again.

EXPER. II. A glass of Wingate water, after remaining for a month freely exposed to the air, had not lost its property of striking a deep purple, yet a film appeared on the top and a sediment of an ochery appearance at the bottom.

Here is an experiment, which not only shews the strength of this water, and that we lose few or none of its properties by keeping, but also points out very distinctly the truth of our former reasoning; for here air is not the only, nor, indeed, a principal solvent of the iron, but some of the mineral acids, by which means the water retains for any length of time its colouring property; but were it to depend entirely on air, it would lose it in a few hours. Upon the whole I think we may safely conclude,

clude, that air as a principle in Wingate spa is not much to be regarded.

To discover whether this water was of an acid or alkaline nature, the following experiments were made.

EXPER. III. Upon adding an acid to a glass of Wingate water, no effervescence ensues, but on the contrary, the astringent acidity is highly increased.

EXPER. IV. Upon adding a few drops of oil of tartar, no effervescence took place, but the water is deprived of its high degree of acidity.

EXPER. V. A small quantity of Wingate water was next added to a tincture of sanders, cloves, roses, &c. but from these no conclusion should be drawn, as a precipitation always ensued. I could not say that it had a tendency either to acid or alkaline.

From these experiments there is reason to conclude, that Wingate water is neither of an acid or alkaline nature.— If it inclines to either, I should say it was acid, for not only does its taste, but also

also the effect of the acid and alkali in blunting and heightening its acidity, confirm this. This acid quality is more predominant at the spring, and requires a greater quantity of the alkali to blunt its taste.

To know whether this water was hard or soft,

EXPER. VI. To a glass of Wingate water was added a small quantity of a solution of soap in brandy, and it immediately rose in clouds to the top; upon agitation it diffused very equally, but made a very opaque milky liquor, much more so than common or distilled water. This experiment had not always the same effect; for in several trials with the first bottle of the mineral water, an immediate coagulation took place, and could not be diffused. It is probable, therefore, that this water loses somewhat of this power by keeping. Another experiment was made, though not with the same view, which may with propriety be introduced here.

EXPER.

EXPER. VII. An equal quantity of boiled new milk being added to Wingate water, it was well mixed at first, and no signs of coagulation took place. After it had stood till cold, the milk was found in globules and coagulated. I tried it in another form, by dropping milk, *guttatim*, into a quantity of the spa water, and could plainly perceive it formed clouds, which afterwards condensed themselves into *floculi*.

This experiment not only shews the water to be gently acid, but points out also, that it will not be proper to drink this water and milk soon after each other.

That sulphur does not exist in this water is evident from the following experiments.

EXPER. VIII. Wingate water, neither in its taste nor smell, indicates any sulphur; nor upon putting a piece of polished silver for upwards of a month in the water, did any change happen, nor was it in the least tarnished. This is a
very

very certain criterion of the presence of sulphur in its volatile state.

EXPER. IX. The residuum also shews no appearance of it; for, when put on a red hot iron, it emits no smell or flame; and when rubbed on silver, it does not alter its colour.

The following experiments were made to discover whether this spa contained any kind of metal.

EXPER. X. Into a quantity of Wingate water I dropped a small piece of iron wire, which remained for several days without the least discolouration, and even was not rusty.

EXPER. XI. This experiment was compared with another, where one fourth of a grain of blue vitriol was dissolved in four ounces of water, and in less than twelve hours the iron was discoloured, and covered with copper coloured crusts. The reason of this change is this: The iron has a stronger attraction for the vitriolic acid than copper, therefore, upon adding the former nail or wire, it immediately

mediately disengages the copper, and is in its turn dissolved, while the copper, being now at liberty, falls to the bottom. From this experiment, and from the quantity to which Wingate water may be drank, we may conclude that it contains no copper.

That this water possesses a very great degree of the chalybeate property, much above those of Bath, Scarborough, &c. will appear from the following proofs.

EXPER. XII. Upon adding a few drops of the tincture of galls to a glass of water, an instant purple colour took place, which, in a few hours, heightened almost to a black, and a considerable precipitation appeared at the bottom of the glass.

EXPER. XIII. With an infusion of green tea, the colour was less dark, and less quickly produced, but attended with a precipitation of a light purple.

These are undoubted proofs of the presence of iron; and in order to form some idea of the quantity of iron contained

tained in the water, it was compared with the following experiment.

EXPER. XIV. To a solution of a quarter of a grain of *sal martis*, in three ounces of water, was added the tincture of galls, and the colour was not more suddenly obtained; the precipitate scarcely so much, but somewhat blacker. This is owing to the presence of a neutral salt in the water, which renders the colour more on the purple.

To discover whether this water contained any sea salt, the following experiment was made.

EXPER. XV. To a quantity of Wingate spa was dropped a solution of quicksilver, but it remained perfectly transparent. If it had contained any sea salt, the water would have become milky.

To know if it was the salt of nitre which this water contained, the following experiments were made.

EXPER. XVI. Upon dipping a piece of paper into Wingate water, and allowing

ing it to dry, it has no property of a match.

EXPER. XVII. Upon dropping some vitriolic acid in the residuum, it emits no sulphureous or suffocating smell, resembling the nitrous acid.

With a view to ascertain whether it contained a Glauber salt, the following experiment was tried.

EXPER. XVIII. It has been already mentioned, that if an alkali be added in very small quantities to Wingate water, a white flocculent precipitation is produced; whereas, if the salt contained in this water was a Glauber salt, no such precipitation would ensue. Further proofs that this water contains no Glauber salt will appear when making experiments to detect *sal catharticus amarus* and alum.

The general test of the presence of an earth is that afforded by dropping a solution of *sal plumbi* into the water, which produces a milkiness and a precipitation. But besides this, there are several, which

may be ascertained by comparative experiments.

EXPER. XIX. When we add to a quantity of Wingate water, a solution of *sal plumbi*, an immediate cloud and precipitation is produced. Here, then, we have the usual test of an earth, but of what kind remains to be ascertained.— A further test of the presence of an earth is that produced by the addition of an alkali, which, when added to Wingate spa, causes a white precipitation.

That these experiments are well founded, appears from a solution of *sal plumbi* producing no effect upon any of the alkaline neutral salts, viz. when added to a solution either of sea salt, Glauber salt, or salt of nitre, it causes no milkiness or precipitation.

Again, as these salts have for their basis an alkaline salt, it is impossible that the addition of a fossil alkali could produce any change.

To endeavour to know what kind of earth was contained in this water, was accomplished

accomplished by the following comparative experiments.

EXPER. XX. If to a solution of *sal catharticus amarus* be added a solution of quicksilver, an immediate milkiness and precipitation is produced.

EXPER. XXI. If to a solution of alum be added a solution of quicksilver, no milkiness or precipitation in any degree follows.

From these two experiments only, a very important discovery is obtained.— It has been already observed, that if to a quantity of Wingate water we add a solution of quicksilver, no change ensues. Now, if the earth contained in this water was a *sal amarus*, a precipitation must have been the consequence, as the first of these experiments clearly shews. Again, we have from the second a presumption that the earth which Wingate water contains is aluminous, as no change was effected by this solution any more than on the water itself, but every way similar.

EXPER. XXII. If a solution of *sal amarus* be added to Wingate water, a flocculent white precipitate very soon appears at the bottom of the glass.

EXPER. XXIII. If a solution of sea salt be added to Wingate water it causes a precipitation also.

EXPER. XXIV. But if a solution of alum be added to the mineral water no change whatever is produced.

EXPER. XXV. On repeating these experiments with a solution of *sal martis*, an ochery precipitation was produced by the *sal marina* and *sal amarus*. With the alum no change happened, but a liquid was produced nearly similar to the mineral water.

From these experiments, as also from the taste of the water, I am sufficiently satisfied that it contained alum; I therefore set about to form a water similar to that of Wingate. Alum is composed of an earth and a vitriolic acid; there is always, however, a superabundant quantity of the acid, which is not neutralized;

ed; I therefore supposed that this water might previously meet with the alum, and having dissolved it, might meet with the iron ore, and dissolve as much as would be sufficient to neutralize its superabundant acid; or, it might be impregnated with both at the same time, for alum is generally found in the mineral ores, and it might have already produced the solution of the iron requisite for its saturation.

EXPER. XXVI. Having formed this idea, I next took half a drachm of alum, and dissolved it in six ounces of common water, to which was added three drachms of pure iron filings, and allowed them to stand for three days exposed to a gentle heat; a very short time after they were mixed, the iron began to be acted upon, and a considerable quantity of air was emitted, which continued during the action of the alum on the iron: the heat of the mixture was very sensibly increased.

EXPER.

EXPER. XXVII. With this artificial water was repeated a few of the characteristic experiments of the Wingate spring; with the infusion of roses, cloves, &c. it had precisely the same effect, shewing itself to be slightly acid.

EXPER. XXVIII. With a solution of soap it produced the same effect.

EXPER. XXIX. When a few drops of the tincture of galls were added, it struck very near the same dark blue, the precipitate of the same appearance and quantity, and these effects were produced nearly about the same time.

EXPER. XXX. With an infusion of green tea it was much the same.

EXPER. XXXI. Upon standing for a length of time exposed to the air, the same ochery precipitate appeared; it lost little of its taste, and retained its colouring property to the last.

EXPER. XXXII. When tried with a solution of quicksilver no precipitation took place.

EXPER.

EXPER. XXXIII. When a solution of *sal plumbi* was dropped into this compound water, it produced the same coloured precipitation with the mineral water; or,

EXPER. XXXIV. If a solution of alkali was added, it was exactly the same with the mineral water.

The examination by mixture is now pushed as far as it could possibly be carried, and the success has more than answered expectation; for, after having detected, by these experiments, a chalybeate and aluminous principle in the mineral water itself, it has been shewn, by proof positive, that these are the only contents of this spring, by generating a mineral water from these principles alone, possessing exactly every property of the original. It only remains, to be fully satisfied, that it be examined in the way of an analysis.

T H E

ANALYSIS OF WINGATE WATER.

As the examination by mixture was found very complete, it will, therefore, be less necessary to enter very minutely into this mode of enquiry, but content ourselves with shewing the chief circumstances.

EXPER. XXXV. One English pint of this water was put into a retort, to which was fitted a receiver; on heat being applied there appeared nothing particularly subtle to come over, that could possibly be discovered by the smell, or by any expanding of the luting; nor upon taking off the receiver and trying the remaining water with galls and other mixtures, for the event of the experiments was uniformly the same, the only difference being in the astringency and acidity of the taste.

Soon after the water began to be heated, and some little evaporation had ensued,

ued, reddish clouds began to appear, which gradually increased and fell to the bottom. When the whole pint was evaporated, there remained of residuum half a dram, which was of a pale yellow colour, had some appearance of small chrystals, tasted the same as the water, but without that agreeable sharpness.

EXPER. XXXVI. Upon adding some water to a quantity of this residuum, it struck a purple with galls. It did not effervesce when spirits of vitriol, or any other acid was added. When dissolved in spring water and filtrated, and the former experiments by mixture repeated, the event was exactly the same.

These experiments are sufficient to shew that the properties of this water are not materially altered by exposure or the heat of boiling water; and that when they are separated from their solvent, they still retain their former nature, although they point out that both
the

the earth and iron are dissolved by acids, and rendered neutral, and are a true vitriol martis and alum. Iron, unless when in the form of a salt, will give no tincture to galls; for when left in the form of an ochery powder, and water added, it gives no tincture by the addition of galls. The residuum gives exactly the taste of alum, being somewhat sweetish along with its acidity; and what further points it out to be in a saline state, is, its being so readily soluble in water.

The next experiments were made with a view to ascertain what were the proportions of these substances, and to obtain them separate and distinct.

EXPER. XXXVIII. A dram of the residuum was put into a crucible, and gradually heated. It soon began to swell and bubble exactly like the burning of alum; this gradually abated, and if the heat was not great and properly managed, it gradually separated into two distinct substances—at bottom was

a red powder, and at top was a white, which evidently tasted like alum. Upon dissolving a small quantity of this saline substance, distinct chrystals were obtained.

EXPER. XXXVIII. The residuum, from the mere evaporation of the water, shews no iron by the magnet, but when put into a crucible and heated red hot, it shews abundance.

One drachm of the residuum was exposed to a bright red heat for a quarter of an hour; when taken out, it was reduced to one scruple, which is exactly one third of its former weight. The powder was now of a dark red, and evidently of two kinds; the iron was calcined in the form of a tolerably fine powder, which was all attracted by the magnet; the alum was reduced to light spongy pieces, about the size of pin-heads, or larger.

To ascertain the quantity of each, contained in the calcined residuum, and for this purpose,

E. EXPER.

EXPER. XXXIX. Twenty grains of calcined residuum (which, previous to calcination, weighed sixty grains) was mixed in a glass of water, and, allowing it to settle, poured it gently off. The ablution was repeated till the water came off clear, when only four grains remained, which was all attracted by the magnet—in all it might be about six grains; the other fourteen grains was an aluminous earth, which had very little taste, but upon exposure to the air, it became more astringent and acid, turned moist and crumbled. The six grains of iron might be supposed to weigh about twelve grains, when in the form of a neutral salt, left by the evaporation of the water. This conclusion is drawn from the quantity of vitriolic acid used for the solution of iron in preparing *sal martis*, where rather more than equal quantity is employed. The fourteen grains of aluminous earth, when in the form of a neutral salt, would weigh thirty grains. To ascertain this,

EXPER.

EXPER. XL. I burnt thirty-four grains of alum, which weighed only fifteen grains upon being removed from the fire. Forty-two grains of the fixty are now accounted for, which was at first put into the crucible; there remains still eighteen unaccounted for. In all solutions of iron where the metal is superabundant, a light yellow ochery precipitate very soon appears.

EXPER. XLI. Upon taking sixty grains of the residuum, and dissolving it in four ounces of water, there remained at the bottom a large quantity of a yellow precipitate. Upon allowing the water to settle, it was poured clear off, and the remainder afterwards dried, and found to weigh ten grains. The remaining eight must either be lost in the process, or too small an allowance is made for the neutral salts, which might be in a greater state of moisture.

The only remaining experiment was to attempt to obtain iron in its metallic state. For this purpose,

EXPER. XLII. Eighty grains of the calcined residuum (which previously weighed half an ounce) was mixed with common flux and charcoal, and exposed to an extreme white heat for half an hour. Upon removing the crucible from the fire, no iron was found fused, but, upon repeated ablutions with water, a dark or blackish matter was left at bottom, which was remarkably gritty and in large particles, and very readily attracted by the magnet at a much greater distance than when in a state of calcination. I make no doubt that from a large quantity of the calcined residuum iron might be obtained in its metallic state.

We have now concluded our examination of Wingate water, and have found it to contain, both from experiments by mixture and analysis, a *sal martis* and alum; and these too in such quantity as
not

not only to entitle it to the name of a mineral water, but also shewing it to be more powerful than any of the mineral spas we are yet acquainted with for the chalybeate property. For a comparative view of it with others, the reader is desired to peruse the introduction.— Upon the whole, it has been found to contain thirty grains of solid matter in an English pint of water, whereof

Six grains are of a true *sal martis*,
Fifteen grains of alum, and
Nine grains of an ochery matter, &c.

THE
MEDICAL VIRTUES

OF
WINGATE SPAW,

WITH THE

Histories of Cures effected by its Use.

FROM the foregoing pages, we have ascertained the constituent principles of Wingate spa to be a *sal martis* and alum; and there is no article in the *materia medica* of greater efficacy than the first of these in restoring strength to debilitated habits, and in removing the great train of consequent symptoms.—Female complaints have only been found to yield to this article. In short, its effects have been so often beneficial, that its reputation is long ago established, and any further panegyric is rendered quite unnecessary.

The

The next property of Wingate spa, which it derives from its activity, to be taken notice of, is alum. In all those waters mentioned in the introduction, alum is barely taken notice of, except in Hartfel and the German spa. In the former there is only a suspicion, in the latter it is very trifling and not worth mentioning. In Wingate spa, however, it is very considerable, and constitutes a very active property of it. Its medical qualities are that of being highly astringent, consequently it has been found serviceable in fluxes, and in increased evacuations of all kinds. Its use has, however, been chiefly confined to external purposes; internally it has been given burnt in violent cholics with immediate relief, and in such cases has proved gently laxative. Now as alum is found to exist in great quantity in this spa, so as sensibly to impart its astringency and sweetish taste, it is not surprising that such complaints as will be related should obtain relief.

This

This water fits very light on the stomach, tends to chear the spirits and promote digestion; wherever it agrees with the patient it proves universally diuretic; and in sluggish habits, if drank to the quantity of two or three pints, it generally procures a stool or two in the day. This effect, however, does not always follow, for in some instances it causes costiveness; and, where this is the case, it may be remedied by the use of some gentle laxative, as rhubarb, tamarinds, &c.

With some patients it induces nausea and sickness; but this is only a rare occurrence, and of short duration in general.

CHOLIC.

From several instances of its effects it would seem to be of general service in most chronical diseases, and to reach from the first organs of digestion to all
that

that affect the blood. In cases of flatulent and spasmodic cholic it has proved of great use, and made a complete cure by stool and urine. Two instances of which I shall here relate, among several others that might be recorded.

CASE FIRST.

Robert Brown, labourer, aged thirty-five years, was instantly seized with cholic pains of the spasmodic and flatulent kind, such as flying severe pains over the whole abdomen, attended with swelling, vomiting, thirst, stricture, &c.—Some of his neighbours gave him peppermint water, gin, &c. which tended to aggravate his distress. In this state he swallowed a pint of this water, which instantly stopped the vomiting, relieved his pain, and procured a stool.

CASE SECOND.

Andrew Hay, aged thirteen years, was seized in the night with violent pain and unequal distention of the abdomen, great
flatulency

latulency and *borborygmi*. His stomach was also distended, and his complaint attended with costiveness. By the persuasion of some of his neighbours he tried the efficacy of gin and several other aromatics, without obtaining any relief; they rather tended to increase the pain. He was at that time in the neighbourhood of Wingate spa, and was induced to try it. He swallowed a pint of it at one draught, which gave him immediate ease, without having any return of his disease.

STOMACH COMPLAINTS.

In dyspepsia, or in cases of slow and difficult digestion, this water is admirably adapted from its stimulating and invigorating powers. This disease consists in debility of the digestive organs, which may be often removed by a timely use of this water, and even when it has baffled the efficacy of medicine. It is essentially necessary, however, to as-
sist

sist the water by observing a proper regimen. All flatulent food must be avoided, and few vegetables used, except bread, which should be well fermented and rather stale than fresh. All mal liquors must be avoided, except good porter and old strong ale, or a little brandy and water. I shall here insert part of a letter I received from Shafto Crafter, of Crafter, Esq. who had applied to me for some of this water.

“ Sir,

“ I have the pleasure of informing
 “ you, that the Wingate spa water, which
 “ I received from you, has been found
 “ very beneficial in the diseases you mentioned,
 “ and particularly so in stomach
 “ complaints, &c.”

In corroboration of the testimony of so respectable a character, I shall only relate a case or two, selected from numberless cures effected by it.

CAS I

CASE THIRD.

A clergyman of my acquaintance, about fifty years of age, of a pale complexion and relaxed habit, had been troubled with indigestion, flatulency, costiveness, and pain in the stomach, &c. for twelve months; and during the last six months never had a natural stool, but what had been procured by medicine. His spirits were much depressed, and he was otherwise very much reduced, though previous to his complaints he was very fat. He in the summer of 1791 went to Wardrewell, but that water did not agree with him; he therefore came to Wingate spa, and had drank the water only two days till he had a natural stool, and sometimes two, in the day. His situation only permitted him to remain at the spa one week, but in that short period he recovered his spirits, had much less pain, and a better appetite.

CASE FOURTH.

Catherine S——, married, aged forty, had been for some time afflicted with vomiting every thing she swallowed. Her bowels were costive, and the vomiting was always preceded by sickness, and what she vomited was ill-tasted and acid. She was ordered a vomit, and to take gentle doses of rhubarb and magnesia, which she did for some time, and the vomiting ceased. She had, however, a daily return of a violent pain in her stomach after dinner. For this she used the bark and bitters; but her complaint did not leave her, till she drank for sixteen days regularly of Wingate spa, which restored her in that time to perfect health.

A S T H M A.

In the spasmodic asthma, this water has also been found useful; and though the

the seat of this disease is not well ascertained, yet this can be of little consequence while the same medicines are made use of to cure the disease. Of its great efficacy in this complaint, I need only relate a single case that came within my own knowledge.

CASE FIFTH.

Henry Charleton, aged fifty, had been for some years attacked at different times with spasmodic strictures of the thorax, which caused a difficulty of breathing, cough, &c. his appetite was impaired, and a general debility took place. He had consulted several gentlemen of the faculty, but without receiving that benefit from their prescriptions which he expected. This induced him to try Wingate spa in the spring of the year 1789, and after drinking this water regularly for five weeks, he left it restored to perfect health.

SCROPHULA.

Scrophula seems to depend on, or at least is much connected with, debility of the system in general; and as it appears to affect the lymphatic glands, it may depend on the lymphatic system in particular. That debility has at least a considerable influence in producing this disease, is probable, not only from the manifest nature of some of the causes supposed to give rise to scrophula, but likewise from such remedies as are found most useful in the cure, which are all of a tonic and invigorating nature.

As this disease often eludes the efforts of the ablest physician, and is also a frequent disease, it must be a great consolation to those afflicted with it, that they can find a remedy in this water, which I have found to excel all other remedies. I could record twenty instances

stances of its efficacy in this disease; but as it would swell this essay to too great a size, I shall content myself with the relation of a single case.

CASE SIXTH.

Mary W——, married, aged forty-two, was for some time subject to pains which she called rheumatism. She was also of a scrophulous habit, and the glands of her neck much swelled. Her legs had also been much swelled for some time, and the skin of a livid colour in several places; and though the swelling was not so great when I saw her, yet, when pressed with the fingers, they left an impression. When she applied for assistance, she had also a puffy swelling in the right knee, which was painful, especially when she attempted to walk. Her belly was costive, and the *catamenia* regular.

Her knee was rubbed twice a-day with a volatile liniment, and she took, at the same time, internally, the gum
guaiacum

guaiacum and cream of tartar. This she continued for some time, which mitigated her complaints a little; but tho' the puffiness of the knee went off, yet the pain continued. She then had recourse to Wingate spa in the spring of 1791, and after drinking the water for a month, she was perfectly cured of all her complaints.

S C U R V Y.

A great many theories have been advanced concerning scurvy; some assert that a vitiated state of the fluids exists, the red globules are said to be dissolved and broke down. This is not universally admitted, especially by Dr Lind, who says, that the serum is not more plentiful than usual, and that the coagulable lymph is in a sound state. The greatest dispute, however, is concerning the cause of this, some imputing it to a putrescent state of the fluids, others to a

a superfluity of saline matter. For my own part I think that the putrescent, and superabundant saline matter both occur; but the latter chiefly in the beginning. Whether this saline matter is a fossile alkali or ammoniacal salt I cannot determine. With regard to Dr Milman's theory, who says, that this disease has its foundation in the muscular fibre, I can by no means agree to; for nothing can be more erroneous than this opinion, in saying, that salt beef causes scurvy, by being indigestible or affording less chyle than red cabbage, which often cures it.

WINGATE SPA, I am convinced, may be of essential service in old obstinate cases of this kind, where particular symptoms do not forbid its use, as fever, cough, &c. No other case of real scurvy has occurred in my practice, but the following, since I began to pay any attention to this spring; and in it, it appears to have had great effects.

CASE

CASE SEVENTH.

Jane I——, aged sixty, was afflicted with livid *mucule*, large *vibices*, spongy gums, and these attended oftentimes with a hæmorrhage from the nose. The *vibices* were chiefly confined to her legs and thighs. Her appetite was much impaired, and her body greatly emaciated. When she applied for assistance, she had been in this state four or five weeks. She was ordered decoction of bark, with a proportion of lemon juice, and at the same time to observe a vegetable diet. She persisted in this course for some time, but though the hæmorrhage abated, yet her gums were spongy, and the purple *mucule* not quite gone. With this she had no return of strength, and was so feeble, as to be scarce able to walk.

She at length tried Wingate spa, and in three weeks, by drinking the water regularly, got perfectly well.

UTER-



UTERINE HÆMORRHAGE.

The theory of this disease is so much involved in that of the menstrual flux, so as to render the investigation of it quite foreign to this essay. The astringent qualities, however, of the alum, and the tonic powers of the iron, contained in this water, render it peculiarly adapted to cases of this nature, where no fever exists with the disease; and I know of no remedy I could put so much confidence in, when no particular symptoms occur to forbid its use. From many cases, where it has proved beneficial, I shall only select two, the latter of which was communicated to me by a surgeon of my acquaintance.

CASE EIGHTH.

Elizabeth ———, married, aged thirty; for four months after a miscarriage she almost always had a flooding, she became

became very feeble, her legs swelled, and belly costive, &c. She also laboured under a *prolapsus uteri*. Medicines, both of the saline and astringent kind, had been administered for some time, which diminished the discharge considerably, but did not relieve her entirely. The bark was also exhibited, but without effecting a perfect cure. After she had in a great measure recovered her strength and appetite, she had recourse to Wingate spa, which she continued drinking for three weeks, and left the spa in perfect health, and the hæmorrhage gone. A piece of sponge, cut into the form of a pessary, and moistened with Wingate water, was introduced into the *vagina*, which, in a few weeks more, cured the *prolapsus uteri* also.

CASE NINTH.

E. C——, married, aged forty-four years, had been subject to violent uterine hæmorrhages for six months, which came on at irregular periods, sometimes
at

at the distance of two weeks. Her last attack, before applying to a surgeon, had continued for seven days. She had also a violent pain in the right temple, and her right eye very much inflamed. The abdomen, at times, was hard, and frequently puffed up, &c. By the direction of her surgeon, she took an anodyne every night, and doses of rhubarb and magnesia to remove the costiveness, which removed the head-ach, and in some measure lessened the discharge. She at length drank of Wingate spa for three or four weeks, and was perfectly cured. During her drinking the water, she took occasional doses of magnesia and rhubarb, to prevent costiveness.

F L U O R A L B U S.

In this disease I cannot recommend Wingate spa too much, as I have seen its powerful effects so conspicuous in many instances. If there are no peculiar symptoms

symptoms to forbid its use, I believe it will seldom fail of curing, and will often succeed where the most favourite medicine will prove inefficacious. For the truth of this assertion, I need only relate the history of a single case to shew its efficacy.

CASE TENTH.

C. B——, married, aged fifty-six, was afflicted with a discharge of thin matter from the *vagina*, which in time became sharp, corroding, and foetid — Her appetite was impaired, her legs swelled, and the least exertion brought on the greatest debility. Her complaints had been of four or five months continuance, when she applied to me. She made use of a variety of medicines, such as are generally given in this disease, such as bark, *terra Japonica*, the cretaceous julep, &c. but without getting free of her disease, though it was much mitigated. I ordered her to go to Wingate spa, of which she drank regularly for

for seventeen days, and left it perfectly cured.

HERPES AND LEPROSY.

Though these diseases are generally considered as distinct, yet, as it is difficult to distinguish the two from each other, and as they sometimes run into one another, I shall consider them as one disease. Under the two terms I comprehend those eruptions which are vulgarly called *scorbutic*; but I commonly call those complaints *herpes* where the eruption is moist, and leprosy where it is dry and scurfy. I believe these diseases arise from a state of debility of the superficial vessels, arising perhaps from a morbid state of the stomach. This gives a good proof of the connection between the stomach and skin. These causes may be supposed to operate,

1. By inducing a morbid condition of the general mass of fluids.

G

2.

2. By bringing on a morbid affection of the cutaneous vessels.

3. By occasioning a depraved secretion from the sebaceous glands of the surface.

4. By occasioning a morbid affection of the bulbs of the hair.

If this be a proper view of these diseases, no medicine is better adapted than Wingate spa to restore tone to the stomach and intestines, when used internally; and as an external application it cleanses the pustules, and restores tone to the superficial vessels, &c. In testimony of its powerful effects in these complaints, I shall relate only two or three cases from among fifty instances where this water effected a cure.

CASE ELEVENTH.

Andrew Turnbull, aged fifty-three years, a cooper, was for several years afflicted with nausea, depraved appetite, a burning heat in the stomach and bowels, attended with flatulency, costiveness, head-ach,

head-ach, and a disagreeable sensation in his right ear. He had also a dry herpetic eruption, attended with heat and itching over all the joints of the body, but particularly about the joints of his knees.

He came to Wingate spa in October 1788, and continued there for seventeen days, during which time he drank the water regularly, and used the general bath five times. He left the spa recovered from his complaints, but having some slight returns of his disease, he returned to the spa in August 1789, and used the water both internally and externally regularly for a month, and left it in perfect health, without any return of his complaints since.

CASE TWELFTH.

Thomas S——, aged thirty years, had been, for many years, afflicted with a herpetic eruption on the face, which was so painful and distressing at times as to deprive him of sleep, and

affected his eyes at the same time to so great a degree, as to injure his sight very much. He being a young man much disposed to travelling, he had consulted with several gentlemen of the faculty at the different towns he had been in, but all their efforts were to little purpose, having never received more than a temporary alleviation of his complaint. He was induced to try Wingate spa, which he used both internally and externally for some weeks. At the end of that time, he left the spa free of the eruption, though he has had a slight return of it since, but never to so great a degree as before he drank Wingate spa.

CASE THIRTEENTH.

William Brown, aged nine years, had for a considerable length of time been attacked with leprous eruptions, which extended over all his thighs and legs, and discharged a large quantity of thin
ferous

ferous matter, so as to wet two or three cloths in a day.

He consulted a surgeon for his disease, who, after prescribing several medicines to very little purpose, advised him to go to a spring called the *Dead-water well*; situated about the head of North Tyne. He continued drinking and bathing in that water for five weeks, but finding he derived no benefit from using it, he left it and came to Wingate spa in July 1789, and remained there seven weeks, during which time he drank the water regularly, and bathed in it at the same time. He left the spa at the end of the seven weeks, perfectly free of all complaints.

OPHTHALMIA;

O R,

INFLAMMATION OF THE EYES.

Inflammation of the eyes is often owing to a relaxed state of the blood-vessels,

and in every case it is attended with a distension of them; consequently, whatever tends to give additional tone, and renders the activity of the vessels greater, will have a powerful effect in removing the inflammation. Now, if this water is calculated for any one purpose, it is for ophthalmia. This I am convinced of from practice; and I have used alum as a collyrium in cases of this kind, and always found it followed with the greatest benefit. I can therefore recommend Wingate spa as a most powerful and beneficial collyrium in cases of inflammation of the eyes; and it will also be found serviceable in the increased secretion of tears, or the sebaceous matter of the eye-lids. If this disease is suspected to arise from a scrophulous taint, this water will be still more useful. In another paragraph of Mr Crafter's letter to me on the subject of this spa, he says, "A person who had a considerable inflammation in his eye, has tried it in the way you mentioned, and found the inflammation

“ inflammation a good deal abated.—
 “ This poor man appeared to be much
 “ troubled with the scurvy.” It would
 swell this essay beyond the limits I have
 prescribed myself to enumerate all the
 cures, in cases of this kind, effected by
 this spa; let it therefore suffice to give
 an instance or two of its influence.

CASE FOURTEENTH.

Jane H——, a servant girl, about
 twenty-five years of age, had laboured
 under an ophthalmia for six months; both
 her eyes were affected, but chiefly the
 left one. The inflammation began at
 her eye-lashes, and then spread over the
adnata. The *cornea* itself soon became
 affected, so that she could see but very
 little light. She was let blood, and
 leeches applied to her temples, &c.
 which, in some measure, diminished the
 inflammation; but, after trying many
 remedies, she was by no means freed
 from her complaint. She next tried the
 Wingate spa, and had not been there a-
 bove

bove three weeks, till she returned home perfectly free of the inflammation.

CASE FIFTEENTH.

John Hewison, about thirty years of age, had a violent inflammation in his eyes, which, from considering several circumstances in his case, was supposed to proceed from a scrophulous habit.— He had tried several *collyriums* as prescribed by some of the faculty, as well as the *nostrums* of several *worthy old women*, without receiving any benefit. - He was at length advised to have recourse to this spring. He drank regularly of the water, and bathed his eyes with it twice or thrice a-day, and in a month's time his eyes were quite well and free of all inflammation.

ULCERS.

The efficacy of Wingate spring in cases of scorbutic and scrophulous ulcers, fistulas, &c.

&c. is truly astonishing and miraculous ; and were it not to exceed the limits I have prescribed myself, I could insert above a hundred instances of its medicinal powers in cases of this kind. Nor is it surprising such complaints should obtain relief, for nothing will more effectually stop a discharge of matter, and deterge a sore, than alum, or even a solution of *sal martis*. The propriety of using it in such cases should, however, be first ascertained, as it is often very improper and even dangerous to heal up old sores. In a letter from Mr George Wilkinson, surgeon in Sunderland, he favours me with the following paragraph relating to diseases of this kind.

“ The trials I have made of Wingate
 “ spa water, in some scorbutic ulcers,
 “ plainly prove it possessed of sanative
 “ powers. It resembles strongly the
 “ Hartfel spa, and is infinitely superior ;
 “ so that whatever the virtues of the lat-
 “ ter may be, that of Wingate should
 “ be by me preferred.”

In

In corroboration of Mr Wilkinfon's opinion, I fhall think it fufficient to infert the histories of two or three cafes.

CASE SIXTEENTH.

John Grearfon, joiner, about eighteen years of age, received a large wound in his right leg, with an axe, which, from careleffnefs and inattention, degenerat- ed in a fhort time into a foul ulcer.— From the ferious afpect it began to put on, he was induced to apply to medi- cal aid, and after following, for fome time, the advice of a furgeon, derived no benefit from his prefcriptions. Some months after the accident, he came to Wingate fpa, by the advice of his friends, and uſing the water for a few weeks, he left it perfectly cured.

CASE SEVENTEENTH.

Robert Dixon, thirty years of age, had a large tumour under the right eye, which was ſome months in coming to a fuppuration. At length it burſt, but
discharged

discharged a thin ichorous matter of a corrosive quality, excoriating the skin wherever it touched. It remained in this state for a great length of time, without the tumour being perfectly dissolved. The sight of the eye became affected, his appetite was impaired, and his body much emaciated. In this state he called in medical assistance, without obtaining any relief. He was, at length, instigated by his friends to try Wingate spa as his last resource. He accordingly began to drink the water, and bathed the part affected with it twice or thrice a day, and, contrary to all expectation, he left the spa in three weeks recovered from all his complaints, and the ulcer quite healed.

CASE EIGHTEENTH.

Edward F——, about thirty-two years of age, had a very large scorbutic ulcer on his left leg, of several years standing, for which he applied to medical aid, though to little purpose; for all
the

the means made use of proved ineffectual, till he had recourse to this spring, of which he drank regularly, and bathed the part affected with it at the same time, two or three times a day. After remaining at the spa only six weeks, he left it perfectly cured of the ulcer, without any bad consequence following the drying up of so great a drain.

CASE NINETEENTH.

Dorothy Minto, aged ten years, was for a long time tortured with a pain below the right ankle among the tarsal bones, which deprived her of sleep, impaired her appetite, and brought on a general emaciation of the whole system. The pained part at length swelled, and was attended with inflammation; after continuing in this state for some weeks, it came to suppuration and burst. The wound discharged a sanious matter for some time, and at length became foetid. She applied to Newcastle infirmary for relief, and, after remaining there

there for several months, she was dismissed incurable. When she left the hospital, the joint was much contracted and emaciated, and she was so very lame when she came to Wingate Spa, that every one who saw her looked upon her case as irremediable. Notwithstanding her hopeless situation, she began to drink this water, and bathed the part affected with it twice a day. She continued this course for eight weeks, and left the spa perfectly restored to strength, and the complaint in her stomach gone, and the ulcer at the same time completely healed.

CASE TWENTIETH.

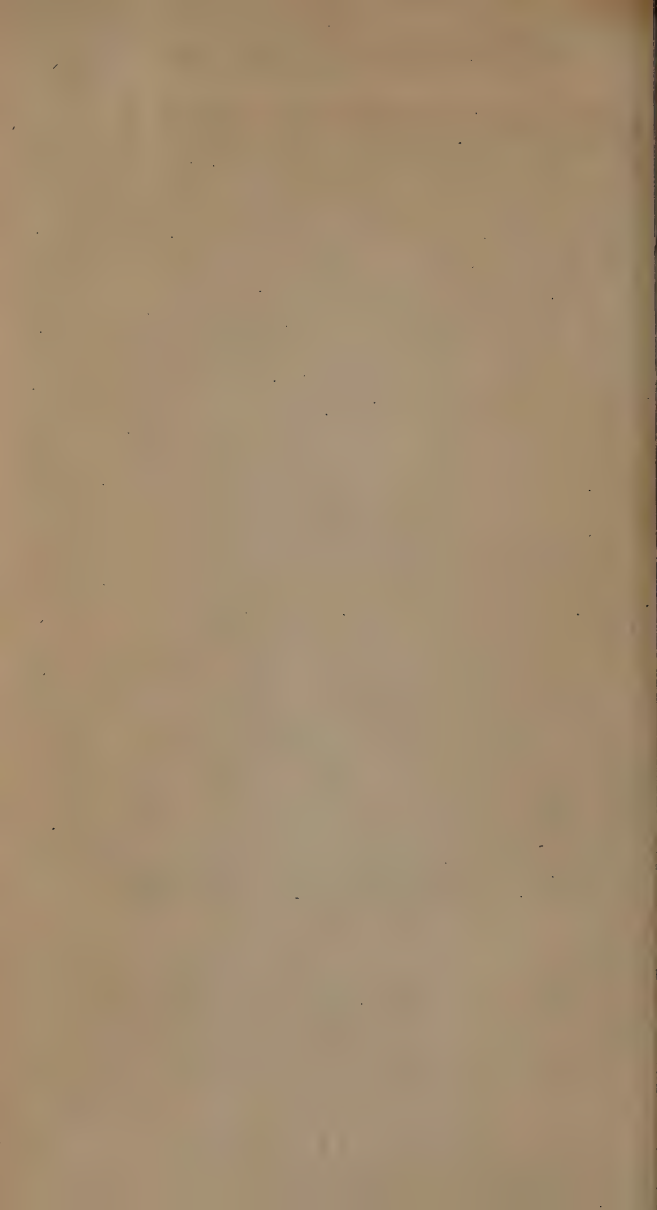
Mary F——, about twenty years of age, had a tumour on the outer angle of the left leg, which, after being a long time in coming to suppuration, burst, and in a short time degenerated into a sinous ulcer, that ran towards the metatarsal bones for three or four inches in length. Several remedies had been
H tried,

tried, but to little purpose. Hearing of the great reputation of Wingate spa for curing such complaints, she gave it a trial, and came to the spring in the summer of 1788. After drinking the water, and bathing the part affected with it twice or thrice a day for seven weeks, observing no other dressing than a little surgeon's lint put gently into the ulcer, she left the spring perfectly cured. It may be necessary to observe, that the surgeon she employed had advised her to lay the *sinus* open, which her dread of the operation prevented her complying with; so that perhaps, if she had submitted to the operation, she might have done well without the use of this water. It is not every one, however, who has resolution to bear the knife; and, in this case, the water was a good substitute.

I have never yet had it in my power to try this water in gleet; but, where the venereal taint has been previously removed, and the gleet owing merely to debility, I am certain Wingate spa would
be

be of the greatest benefit, both as a tonic and astringent. It should, in cases of this kind, be used both internally and externally. If it is, however, a powerful remedy in gleans after the venereal taint is removed, it would also be a most dangerous medicine, if used previous to the removal of such taint. I would therefore advise such patients as may be induced to try this water for such complaints, to be well assured that no other symptom of the venereal kind remains with them but the gleet, otherwise they may suffer for their temerity.

In cases also of seminal weakness, or involuntary emission of *semen*, which are often owing to excessive venery, hard living, or to all such causes as induce general debility, this water is well suited to remove such complaints, and is a remedy I would prefer to all others.



DIRECTIONS

FOR

USING WINGATE SPA.

PREPARATION.

THE practice of preparing the body for the drinking of mineral waters is prescribed to every patient, whatever his complaint may be. This is, however, a very absurd conduct, and has been attended with the most pernicious consequences. There are scarcely any two cases that require the same methods. It is often carried too far, and quite in opposition to the nature of the case; for surely nothing can be more ridiculous than giving a drastic purge in an emaciated and weakly habit, more particularly

H 3

ticularly if the bowels are in an irritable state, which is very generally the case in leucophlegmatic constitutions. It is certainly proper, in many cases, to cleanse the *primæ viæ* previous to drinking the water; but it having been observed, that the medical virtues of this water are entirely tonic and astringent, it is to be supposed that only such cases as originate from causes inducing debility and relaxation will come for relief to this spring—and those diseases constitute more than one half of the whole to which mankind are exposed: It would, therefore, be highly inconsistent to direct repeated doses of Glauber's salts.— One distinction is to be attended to: all those cases which consist in an affection of the system in general, or of complaints arising from such general affection, ought to have a more mild preparation than those of an opposite nature, viz. topical ulcers of all kinds, ophthalmia, &c.

Emetics are attended with the greatest benefit, such as in stomach complaints

plaints and hypochondria, where there is reason to suspect a quantity of phlegm.

Purgatives are in more general use than vomits as preparatory to the drinking of Wingate spa. I would, in all cases of the first distinction, prefer a dose of rhubarb to Glauber's salts, or any such active purge. In cases of the other nature less harm can be done by salts, but I would even prefer cream of tartar, tamarinds, &c. They sometimes require to be repeated, but this should be done with caution, or we may be apt to throw the patient back into his former situation.

Bleeding is a mode of preparation seldom requisite, and not at all applicable to cases where this water may prove beneficial.

TIME OF DRINKING.

The time at which mineral waters are drank is in the morning, and it is certainly the best for very obvious reasons. It is always preferable to drink them

them at the spring; but if patients cannot possibly attend, Wingate spa will suffer but little from carriage. But drinking it, however, at the fountain, is the best method for obtaining all the qualities of the water, as the exercise of going to the well is of itself a very important point. It increases the strength, enables the stomach to overcome the water, promotes the secretions, and increases the appetite.

The quantity of the water ought always to be regulated by the nature of the case; and, in general, it is always proper to begin with small quantities at first, and gradually increase it.

I am confident, there is often great abuse in the drinking of waters, and that the worst consequences often follow. It is impossible to conceive that swallowing six, eight, or more, English pints in a day can be of any advantage; on the contrary, it must injure the stomach and bowels. The weaker waters are generally drank in larger quantities at

a time, but, in my opinion, it should be otherwise; for, if the water has no considerable power, it loads and overpowers the stomach, and destroys instead of increasing the vigor. Wingate water has not, however, this fault, for we have found it one of the strongest minerals yet known. I think the quantity drank at a time should never exceed half a pint or three-fourths of a pint; a gill to be swallowed forenoon, afternoon, and evening, and in the morning double or triple that quantity. At this rate the patient will have taken eight or nine grains of *sal martis*, and twenty grains of alum in a day. It should always be taken an hour or two before or after meals.

EXERCISE.

Exercise and amusement should be particularly attended to during the time the water is drank, otherwise it will operate more slowly. Walking, or riding on horseback, or in a carriage, if the person

person is much debilitated, are the preferable modes. Every violent exertion is improper.

REGIMEN.

Regimen ought always, in every case, to be attended to. Nothing is more conducive to health than regularity in every particular. The diet should, in general, be light and nutritious, and often generous. Intemperance ought to be carefully avoided; for nothing possesses more debilitating powers. In many cases wine will particularly suit this water.

When the water does not agree, it should be given up, after a fair trial has been made.

The length of time a water should be drank must always be regulated by its effects. It is the common custom, upon giving over drinking, to take some laxative, to cleanse the *primæ viæ* from the water. This is a practice so foolish and
contrary

contrary to common sense that it requires no confutation.

BATHING.

For the external use of this water no directions are necessary. In ulcers it should be used twice a day, and in cases of inflammation of the eyes it should be used several times.

When we have recommended this water as a tonic, it is evident its effects may be much assisted and increased by cold bathing. This, as well as drinking of the water, should always be done in the morning, before breakfast. Patients who are very much debilitated, will not be able to stand the absolute cold of the spring; it will, therefore, be requisite to reduce it, by adding some warmed, which can be gradually reduced, till it is entirely done away; and, afterwards, the spring itself may be used with the greatest safety. For want of this precaution, the cold bath has been given up as pernicious,

nicious, when it would have been highly serviceable.

It is impossible to prescribe for particular cases; these must always be left to the judgment of the faculty, who may very often assist the use of this water, not only by his directions, but also by the aid of some well ordered medicine.



